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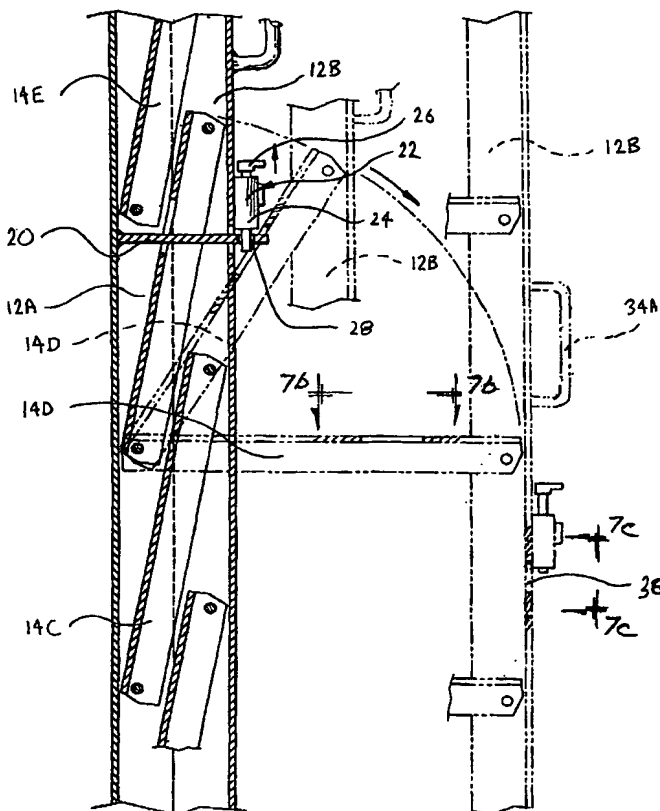
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(54) Title: COLLAPSIBLE LADDER



(57) Abstract: The present invention relates broadly to a collapsible ladder (10) comprising a pair of opposing rails (12A) and (12B) interconnected with a plurality of rails (14A) to (14J). The collapsible ladder (10) can be moved or manipulated from a collapsed condition to an operative condition. In the collapsed condition the opposing pair of rails are (12A/B) locate adjacent or abut one another whereas in the operative position the rails (12A/B) are laterally spaced with the interconnecting rungs (14A) to (14J) being disposed substantially perpendicular thereto. Each of the rungs such as (14A) is at its opposing ends pivotally connected to respective of the opposing pair of rails (12A/B). This pivotal connection between the rungs such as (14A) and rails (12A/B) allows the ladder (10) to move from its operational to collapsed conditions.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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AMENDED CLAIMS

[(received by the International Bureau on 19 August 2003 (19.08.03);
original claims 1-15 replaced by new claims 1-12 (2 pages)]

1. A collapsible ladder comprising:
a pair of opposing and substantially parallel rails;
5 a plurality of rungs being elongate and pivotally connected at or adjacent
opposing ends to respective of the pair of rails whereby the ladder can be
moved from an operational condition wherein the parallel rails are laterally
separated from one another and disposed generally perpendicular to the rungs
to permit access to the ladder, to a collapsed condition wherein the rails on
10 movement relative to the rungs locate adjacent one another to prevent access to
the ladder; and
locking means being operatively coupled to the pair of rails to prevent their
separation in the collapsed condition, the locking means including a locking pin
rigidly connected to one of the rails and a locking mechanism mounted to
15 another of the rails and being operable to releasably engage the locking pin with
the ladder in the collapsed condition.
2. A collapsible ladder as defined in claim 1 wherein the locking pin is at one end
integrally connected to the rail and at or adjacent an opposite end has a hole
configured to be engaged by a plunger of the locking mechanism.
- 20 3. A collapsible ladder as defined in claim 2 wherein, with the ladder in the
collapsed condition, the locking pin is designed to pass through an opening in
an underlying of the rungs together with an aperture in an opposing of the rails
wherein the hole in the locking pin is exposed for engagement by the plunger.
4. A collapsible ladder as defined in any one of the preceding claims wherein the
25 collapsible ladder at and adjacent its upper end is free of the ladder rungs for a
height substantially greater than shoulder height of a person and providing
unobstructed access between the pair of rails.
5. A collapsible ladder as defined in any one of the preceding claims further
comprising anchoring means connected to one or both of the pair of rails and
30 being adapted to permanently or temporarily mount the ladder to a structure.
6. A collapsible ladder as defined in claim 5 wherein the anchoring means includes
a bracket connected at a lower end of one of the rails and adapted to fix to a
lower part of the structure, and a locating member connected adjacent an upper

end of the one of the rails and adapted to anchor to an elevated part of the structure.

7. A collapsible ladder as defined in claim 6 wherein the bracket is pivotally coupled to the rail to permit variations in the pitch of the ladder, and the
5 locating member includes a locating pin being adapted to removably locate in a corresponding recess in the structure.
8. A collapsible ladder as defined in any one of the preceding claims wherein the pivotal connection between the rungs and the rails is provided by a pivot pin coupled to the rail and each of the rungs.
- 10 9. A collapsible ladder as defined in any one of the preceding claims wherein the pair of rails are each fabricated of channel-section members having their respective flanges aligned with and directed toward one another, the rungs being configured to nest within the channel-section rails with the ladder in the collapsed condition.
- 15 10. A collapsible ladder in claim 9 wherein the rungs are also fabricated of channel-section members having a width dimension across opposing flanges of less than the corresponding internal width dimension of the rails.
11. A collapsible ladder as defined in any one of the preceding claims additionally comprising at least one handle connected to one of the rails and positioned such
20 that the ladder in its collapsed condition is evenly weighted about said handle.
12. A collapsible ladder as defined in any one of the preceding claims wherein the collapsible ladder is fabricated from roll-formed steel.